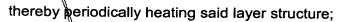
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receiving infrared radiation emitted by said layer structure that is correspondingly modulated in intensity; and

evaluating said received infrared radiation as a function of a drive frequency on the basis of amplitude or phase by simultaneously interpreting corresponding drive frequencies.

- 2. (Amended) The method according to claim 1, wherein said heat source is a laser, a laser diode, or a light-emitting diode.
- 3. (Amended) The method according to claim 1, further comprising the step of: adapting discrete frequency parts of said drive frequencies to a measurement function.
- 4. (Amended) The method according to claim 1, further comprising the step of:detecting predetermined frequencies with a lock-in evaluation.
- 5. (Amended) The method according to claim 1, further comprising the step of:evaluating individual frequencies using a Fast Fourier Transform.
- 6. (Amended) The method according to claim 4:

  further comprising the step of providing an additional evaluation based on a regression analysis or a neural network.